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(54) WIRELESS DATA TRANSMISSION SYSTEM, AND WIRELESS DATA TRANSMISSION/RECEPTION APPARATUS

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a wireless data transmission system utilizing the SDM and compatible with a conventional wireless communication system, and to provide a wireless data transmission/reception apparatus.

SOLUTION: The wireless data transmission system including a transmission apparatus and a reception apparatus is characterized in that when the transmission apparatus starts data transmission to the reception apparatus, the transmission apparatus transmits data including a maximum number of antennas available for the transmission and a maximum number of available data sequences to spatial division multiplexing control data to the reception apparatus, and when the transmission apparatus receives a discrimination result indicating impossibility of reception by the number of the transmission antennas and the number of the data sequences, the transmission apparatus transmits data including a reduced number of the transmission antennas and a reduced number of the data sequences to the spatial division multiplexing control data to the reception apparatus.

